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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,634	05/08/2001	Alan R. Reinberg	MI22-1704	4400
21567	7590	04/02/2004	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			WILLIAMS, ALEXANDER O	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,634

Applicant(s)

REINBERG

Examiner

Alexander O Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 64-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 71-79 is/are allowed.
- 6) ☒ Claim(s) 64-780 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Serial Number: 09/851634 Attorney's Docket #: MI22-1704

Filing Date: 5/8/2001;

Applicant: Reinberg

Examiner: Alexander Williams

This application is a divisional application of U.S. Patent Application Serial # 09/561794 filed on May 1, 2000 which is a divisional of U.S. Patent Application Serial # 09/444280 filed on November 19, 1999.

Applicant's Response, filed 1/6/04, has been acknowledged.

Claims 1-63 have canceled.

The disclosure is objected to because of the following informalities: The related application information should be updated.

Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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Initially, it is noted that the 35 U.S.C. § 103 rejection based on a raised mandril and a layer of structural material forming an edge deals with an issue (i.e., the integration of multiple pieces into one piece or conversely, using multiple pieces in replacing a single piece) that has been previously decided by the courts.

In Howard v. Detroit Stove Works 150 U.S. 164 (1893), the Court held, "it involves no invention to cast in one piece an article which has formerly been cast in two pieces and put together...."

In In re Larson 144 USPQ 347 (CCPA 1965), the term "integral" did not define over a multi-piece structure secured as a single unit. More importantly, the court went further and stated, "we are inclined to agree with the solicitor that the use of a one-piece construction instead of the [multi-piece] structure disclosed in Tuttle et al. would be merely a matter of obvious engineering choice" (bracketed material added). The court cited In re Fridolph for support.

In re Fridolph 135 USPQ 319 (CCPA 1962) deals with submitted affidavits relating to this issue. The underlying issue in In re Fridolph was related to the end result of making a multi-piece structure into a one-piece structure. Generally, favorable patentable weight was accorded if the one-piece structure yielded results not expected from the modification of the two-piece structure into a single piece structure.

Claims 64, 65 and 80 to 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al. (U.S. Patent # 4,942,449).

For example, in claim 64 and similar claim 80, Wei et al. (figures 1 to 7) specifically figure 7 show an intermediate construction of an integrated circuit comprising: a semiconductor substrate (**lower portion of 10**); a raised mandril (**upper portion of 10**) over the substrate, the raised mandril being raised out from the substrate and having at least one edge substantially perpendicular to the substrate and at least

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one beveled edge (**side beveled portion of 2**); and a layer of structural material **14b** forming an edge defined feature on the at least one perpendicular edge.

In claim 65, Wei et al.'s bevel is less than or equal to about 45 degrees. It would have been obvious to one of ordinary skill in the art to provide the bevel having the angle in the range as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPTO 233.

Therefore, it would have been obvious to one of ordinary skill in the art to use the raised mandril and the layer of structural material forming an edge as "merely a matter of obvious engineering choice" as set forth in the above case law.

Claims 64 to 70 and 80 to 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto (Japan Patent # 6-120483).

For example, in claim 64 and similar claim 80, Sakamoto (figures 1 to 9) specifically figures 3 and 6 show an intermediate construction of an integrated circuit comprising: a semiconductor substrate **1**; a raised mandril **2** over the substrate, the raised mandril being raised out from the substrate and having at least one edge substantially perpendicular to the substrate and at least one beveled edge **1a**; and a layer of structural material **2** forming an edge defined feature on the at least one perpendicular edge.

In claim 65, Sakamoto's bevel is less than or equal to about 45 degrees. It would have been obvious to one of ordinary skill in the art to provide the bevel having the angle in the range as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPTO 233.

In claim 66, Sakamoto's raised mandril comprises four edges, including two edges (**see figure 6 top portion of 2**) substantially perpendicular to the substrate and two beveled edges (**see figure 6 lower portion of 2**).

In claim 67, Sakamoto's structural material is conductive **2 (see the constitution)**.

Therefore, it would have been obvious to one of ordinary skill in the art to use the raised mandril and the layer of

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structural material forming an edge as "merely a matter of obvious engineering choice" as set forth in the above case law.

Claims 71 to 79 are allowed.

Response

Applicant's arguments filed 1/6/04 have been fully considered, but are moot in view of the new grounds of rejections detailed above.

Field of Search	Date
U.S. Class and subclass: 257/486,586,623,618,622,329,403,751-764 438/669,412,459,713	3/9/03 9/26/03 3/30/04
Other Documentation: foreign patents and literature in 257/486,586,623,618,622,329,403,751-764 438/669,412,459,713	3/9/03 9/26/03 3/30/04
Electronic data base(s): U.S. Patents EAST	3/9/03 9/26/03 3/30/04

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AOW
3/31/04

A handwritten signature in black ink, appearing to read 'Alexander Williams', is positioned above the printed name and title.

Alexander Williams
Primary Examiner